

REMARKS

The Applicants extend their appreciation to the Examiner for the interview of July 6, 2004. This response includes amendments and remarks that were discussed during the interview, as reflected in the Interview Summary.

Independent Claims 1, 37, and 73 have been amended. Claims 1-4, 6, 7, and 11-88 are pending in the application. The specification has also been amended for consistency and for better form. These claim and specification amendments are supported by the application as originally filed and do not present new matter.

The Applicants respectfully request reconsideration of the objection and rejection in view of the above amendments and the following remarks.

I. OBJECTION UNDER 35 U.S.C. §132.

The Office action objected to the amendment of March 29, 2004 on the basis that the paragraph beginning on page 4, line 31 and the independent claims, as amended, referred to a de-centralized database system. During the interview, the Applicants discussed the de-centralized aspects of embodiments, however, in order to expedite prosecution of the application, the Applicants have deleted all references to “de-centralized” that were submitted in the March 29, 2004 Amendment.

Specifically, the Applicants have deleted references to “de-centralized” in the claims. Further, the Applicants have amended the paragraph beginning on page 4, line 31 to recite “FIG. 1 is a schematic illustrating a distributed database system having a data processing system that is embodied in client and server computers according to one embodiment;”. This description of FIG. 1 is supported by the application as filed. See, e.g., p. 4, lines 31-32; page 6, lines 11-25 (referring to one embodiment providing a data processing system); FIG. 1 (illustrating data processing system 112 embodied in a client and a server).

Accordingly, the Applicants respectfully submit that the objection be withdrawn since no issue of new matter remains.

II. REJECTION UNDER 35 U.S.C. §102(b).

Independent claims 1, 37 and 73 and respective dependent claims 2-4, 6, 7, 11-36, 38-72 and 74-88 were rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,724,575 to Hoover *et al.* (“the Hoover patent”). In order to expedite prosecution of the application, the Applicants offer amendments to independent claims 1, 37, and 73 and the following remarks, in accordance with the interview of July 6, 2004.

During the interview, the Examiner requested that the Applicants identify sections of the specification of the subject application describing the data processing system 112. The Applicants point out the following specification sections for the Examiner’s reference.

The subject application generally describes a client-server database system in which distributed databases having different or heterogeneous data structures can be efficiently searched in parallel or “simultaneously” using a data processing system 112. Data processing system components 112 reside on a client and a server. See, Figure 1 (arrows indicating data processing system 112 embodied in client and server); p. 6, lines 22-25; p. 7, lines 21-27 (data processing system 112 is embodied in a client computer and an application server and may be executed between the client and network server computers.)

Thus, as discussed during the Interview, the data processing system 112 defines a protocol that governs how data is searched and how heterogeneous data formats are reconciled. Since the data processing system 112 or protocol is embodied in a client and a server computer, there is no separate computer or intermediate broker and no use for such an intermediate or central broker. Rather, embodiments provide for clients and servers that can communicate independently, without depending on an external or third party or central broker. As a result, embodiments provide for reconciling data formats directly between clients and servers using the distributed data processing system 112 rather than having to direct all data management and processing through a central broker.

The data processing system facilitates the indexing, searching, and retrieval of data from data sources 106. p. 6, lines 23-25. Queries from a client computer 102 may request data from one or more databases within one or more data stores 106. The data processing system 112 facilitates searching and retrieval of data from one or more data sets of one or more data stores in response to queries.

More specifically, the subject application describes a data processing system 112 that performs various data processing and data format reconciliation functions. See, e.g., p. 8, line 13 (executes in conjunction with database); p. 8, line 21 (data searching and retrieval); p. 9, line 11 (identifies objects satisfying query); p. 9, line 21 (receives source data tables); p. 16, line 12 (performs join operation); p. 20, line 27 (generates inverted tables); p. 21, line 15 (performs join operations); p. 21, line 30 (maintains associations of each term or keyword with related object and field reference); p. 23, line 11 (uses reverse lookup tables); p. 23, line 20 (determines whether value is entered in a table); p. 25, line 16 (reconciles different data classifications); p. 26, line 6 (uses metadata standards); p. 26, line 27 (attempts to open multiple collections); p. 27, line 29 (maps standard and collection field to intermediate mapping standard field); p. 28, line 14 (supports mapping of multiple fields to one mapping field); p. 29, line 27 (identifies native collection fields that map to a standard field); p. 29, line 22 (identifies objects satisfying query search criteria); p. 30, line 23 (locates list of objects using field values); p. 31, line 21 (submits query); p. 32, line 24 (formats values for display); p. 37, lines 1-26 (search/retrieve objects in various databases and formats).

In accordance with the interview of July 6, 2004, the Applicants have amended independent claims 1, 37 and 73 to include limitations directed to the data processing system 112. For example, amended claim 1 recites in part “providing a data processing system, the data processing system being embodied in the client computer and the plurality of server computers” and “wherein steps (b)-(i) are executed between the client and the plurality of server and through the communications network using the data processing system.

These amendments are supported by the specification as originally filed, as discussed above in detail, and as discussed during the Interview. Independent claims 37 and 73 have also been amended to include similar “data processing system” limitations.

The Hoover patent fails to disclose or suggest “providing a data processing system, the data processing system being embodied in the client computer and the plurality of server computers” and “wherein steps (b)-(i) are executed between the client and the plurality of server and through the communications network using the data processing system and the related limitations of claims 37 and 73.

In contrast, Hoover is specifically directed to a system that uses a separate centralized object broker 20. For example, Hoover illustrates a central object broker 20 in Figures 1 and 2.

Further, Hoover explains that “the object broker 20 is the central computing entity that is responsible for managing objects within the preferred embodiment of the present invention, and imposing (by virtue of its existence and limitations) a homogeneous data model upon the varying heterogeneous systems at the remote user computer sites 12.” Hoover, col. 22, lines 1-6. See also, Hoover, Figures 1 and 2 (object broker 20 separate from client sites); col. 4, lines 42-44; col. 21, line 15; col. 21, line 15 (“Central Computer or ‘Object Broker’”). Hoover further explains that “it falls upon the object broker to control the instances of objects within the system and the coordination of information that allows storage, retrieval and updating of information pertaining to the objects of the system”. Hoover, col. 22, lines 8-11.

Correspondingly, the Hoover patent does not disclose or suggest limitations directed to a data processing system, a data processing system being embodied in the client computer and the plurality of server computers, and a data processing system that is executed between the client and the plurality of servers. Based on the forgoing amendments and remarks, the Applicants respectfully request that the rejection of independent claims 1, 37 and 73 and respective dependent claims 2-4, 6, 7, 11-36, 38-88 under 35 U.S.C. §102(b) be withdrawn in view of these multiple, and significant, deficiencies.

Further, the Applicants further respectfully submit that independent claims 1, 37 and 73 and all of their respective dependent claims are not obvious in view of the Hoover patent given the substantial changes that would be required, changes that are contrary to central broker system described in Hoover. The Hoover patent specifically distinguishes and, teaches away from, a system having a data processing system that is embodied in a client and a plurality of server computers, and that is executed between the client and server computers as claimed since the Hoover patent is specifically directed to a central object broker.

For example, as previously discussed, the Hoover patent explains “[a]s discussed in connection with FIG. 1, the object broker 20 is the central computing entity that is responsible for managing objects within the preferred embodiment of the present invention, and imposing (by virtue of its existence and limitations) a homogeneous data model upon the varying heterogeneous systems at the remote user computer sites 12.” (Hoover, col. 22, lines 1-6). Further, Hoover explains that “[i]t is therefore apparent that the [prior art] literature teaches away from the use of a centralized server for purposes of object management.” (Hoover, col. 4, lines

42-44 (emphasis added). Clearly, Hoover teaches away from the Applicants' claims since Hoover himself states that the prior art teaches away from his central object server or broker.

III. CONCLUSION.

Based on the forgoing amendments and remarks, the Applicants respectfully submit that the application is in condition for allowance and respectfully request that a timely Notice of Allowance be issued in this case. If there are any remaining issues that can be resolved by telephone, Applicants invite the Examiner to contact the undersigned at the number indicated below.

Respectfully submitted,

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